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MARCH 2017

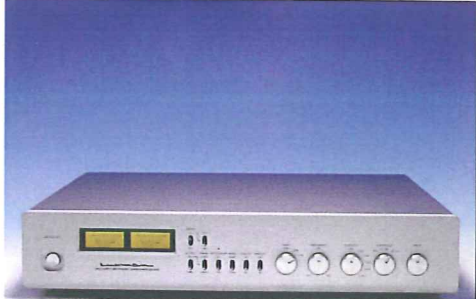
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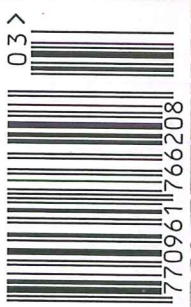
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American Beauty



Iconic US company Audio Research has unveiled a new entry-level DAC with a valve-based analogue stage. Jon Myles loves how it sounds.

There's no mistaking the look of American high-end manufacturer Audio Research's range of components. Like its sister US company McIntosh (they're both owned by the Italian Fine Sounds Group), Audio Research products have a distinctive design that sets them apart from rivals.

First they boast a workmanlike, purposeful look with a minimum of fripperies in a style that hasn't changed much over almost 50 years of continuous production. Then, they have a bomb-proof build quality which makes you realise why some of the company's original products are still giving sterling service to this day.

And – most strikingly – they're pretty big. This includes the new DAC9 digital-to-analogue convertor I am reviewing here. Give it a cursory glance and you'd be forgiven for thinking it was a muscular power amplifier, with its hefty 137mm x 480mm x 348mm (H/W/D) casework, a pair of studio-like grab handles either side and a perforated top plate for ventilation.

In the days of some DACs measuring not much more than a paperback book the size could be seen as overkill – but there are good reasons for it.

For a start, you know immediately it's an Audio Research with all the kudos that entails.

Secondly, it's part of a new entry-level Foundation series products that all share similar dimensions for aesthetic purposes. Along with the DAC9 there's an LS28 pre-amplifier and PH9 phono stage – with a VT80 power amp on its way.

Finally, the analogue output circuit of the DAC employs a pair of valves (or tubes should I say!) – 6H30 triodes which, while not running overly hot, do need room to breathe.

The digital section of the Audio Research uses a quad DAC architecture based on the Burr-Brown PCM1792A chip for both PCM and DSD data. Additionally, all PCM data in the DAC9 utilises an external digital processor with 32-bit precision which is said to provide a much more natural sound.

All DSD data is maintained in its

original form and direct-converted and analogue-filtered within the Burr-Brown PCM1792A DAC, as opposed to the more the common practice of converting DSD to PCM.

There's the standard array of inputs, USB accepting up to 384kHz files as well as DSD, whilst a continuous S/PDIF digital stream can enter through RCA phono sockets, a BNC connector, an AES/EBU balanced XLR socket (192kHz), or Toslink optical (96kHz).

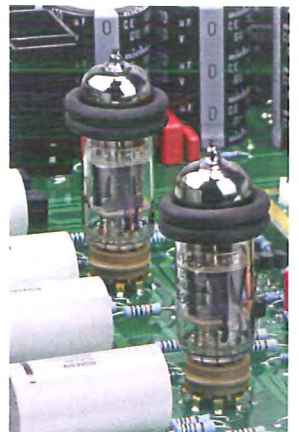
Outputs are on both RCA phono sockets and balanced XLRs.

Selectable digital filters allow the user to choose between slow and fast roll-off, and a 384kHz upsampling option available on all inputs.

The latter functions, as well as on/off, input and mute, can be selected through a row of six push buttons on the fascia that sit below a large, fluorescent display screen. Alternatively a metal-bodied remote gives access to all the controls.

Price? Exactly £7,498 – not an insignificant amount, but when you consider the exemplary build quality – including hand-soldered

Audio Research DAC9 uses a pair of 6H30 triode valves in its analogue output stage.



circuit boards and specially selected parts – plus promised longevity (Audio Research claims it can repair, refurbish or restore almost any product it has ever made), it starts to make sense. The Foundation series may be entry-level but the DAC9 gives little away to some of its more expensive brethren in terms of construction. As for its sonic attributes...

SOUND QUALITY

Slotting the DAC9 between a McIntosh MC152 power amplifier and the excellent Bluesound Vault 2 high-resolution music server, it took just a few tracks to realise the DAC9 is an especially refined performer. There's nothing cold or clinical in its performance, rather an unforced, organic presentation with just a hint of warmth to it.

That warmth, though, doesn't come at the expense of instrumental definition. Take BB King and Eric Clapton's steamy 'Three O'Clock Blues' workout (88.2kHz). There was both initial sting and a sense of body to guitar notes – and they echoed into the distance just a little longer than usual; the track dripped with atmosphere.

I put this effect down to the fact that DAC9 is free of digital hash and so instruments have exceptional clarity, with air and space around them.

Moving to the Guarneri String Quartet's rendition of Ravel's 'String Quartet in F Major' (96kHz) the sound of finger on string during the pizzicato section was so lifelike I could almost picture the player in front of me.

Allied to this detail was a degree of muscularity that imbued rock music with controlled power. On Johnny Thunders And The Heartbreakers' 'Get Off The Phone' the drums not only pounded, but had a vibrant bounce to them. Bass was fulsome and rounded, the Acoustic Research having a low-end many DACs struggle to match. This is quite a muddy recording with a production that does the band no favours, but the DAC9 managed to cut through it all to deliver the attack and propulsion the track deserves.

Switching on the upsampling mode also helped clear some of the recording's inherent mush bringing extra sparkle to the guitars.

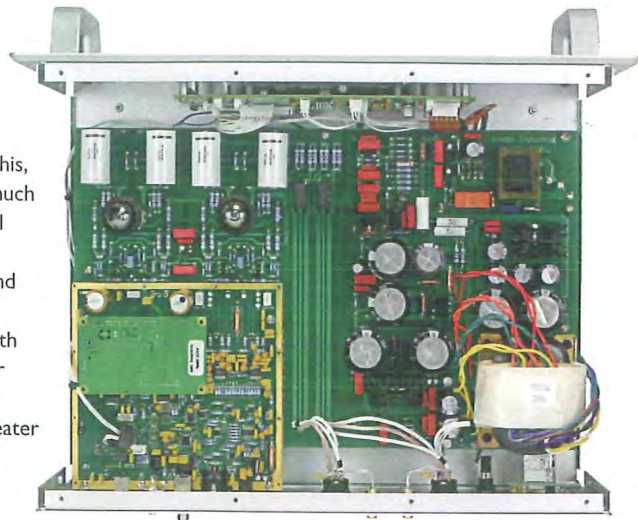
As for the digital filter options, I preferred the slow setting which seemed to bring a greater sense of

scale; the fast roll-off sharpened things up at the expense of overall organic flow. This, though, will be very much a question of personal taste.

I'd also recommend using the balanced outputs if you can. With the McIntosh amplifier these gave a markedly bolder sound with greater stage depth without sacrificing any of the DAC9's inherent detail.

Whatever the settings and connections, though, the Acoustic Research DAC9 paints an entirely convincing musical picture. It can beguile you via a smooth, authoritative and detailed presentation with sophisticated recordings, but respond with power, guts and driving rhythm when replaying a raucous guitar, bass and drums combination.

If you are looking for a DAC at around this price-point then the Acoustic Research should be at the head of your shortlist.



Internally, construction is to Audio Research's high standards with hand-soldered circuit boards and neat wiring. The circuit itself is built around a Burr-Brown PCM1792A DAC chip.

CONCLUSION

The DAC9 may not boast some of the bells and whistles of some digital-to-analogue converters but what's inside counts and this is where it comes up trumps. The sound is deliciously rich and detailed, with a healthy dose of attack and vigour that never failed to excite me. If you've ever fancied a slice of the Audio Research sound but couldn't quite stretch to the price then this new entry-level component could be for you.

MEASURED PERFORMANCE

DAC9 delivers 3.7V from its balanced (XLR socket) output and 1.85V from its unbalanced (phono socket) output, just a tad below standard (4V/2V) and what is becoming common (6V/3V). The point being DAC9 will not seem as loud as competitors; volume will need to be

increased a tad. This is unusual for valve based equipment where high voltage swings and output overload values are easy to achieve and commonly used to make a product 'loud'.

Valves suffer thermal noise that limits distortion and dynamic range figures. DAC9 all the same managed a high 116dB dynamic range from its balanced output, but a low 105dB – little better than CD – from its unbalanced phono socket output, so is best run from its balanced output.

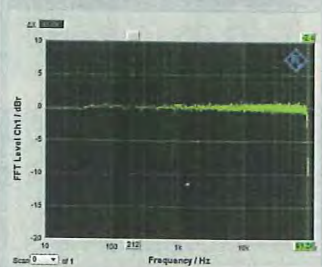
Distortion via XLR was low at 0.2% from CD and 0.03% from hi-res digital (24bit), figures up with the best.

Frequency response was very wide, stretching flat from 4Hz to 90kHz, with a very steep cut-off above this frequency to the 96kHz upper theoretical limit for 192kHz sample rate.

With valves it is difficult to get class leading distortion, noise and dynamic range figures, but DAC9 manages well all round, dynamic range inevitably being below that of the best solid-state units. NK

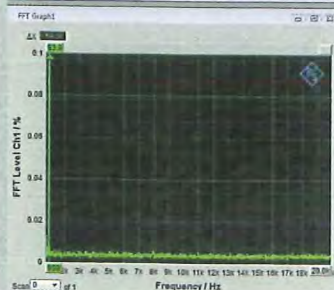
Frequency response	4Hz-90kHz
Separation	94dB
Noise	-115dB
Distortion	0.03%
Dynamic range (24bit)	116dB

FREQUENCY RESPONSE



DISTORTION

Ch1	THD at 0	Level / dB	Frequency
Ch1	0.0323 %	3.7192 mV	997.00 Hz
Ch2	OFF	OFF	OFF



AUDIO RESEARCH DAC9 £7498



OUTSTANDING - amongst the best.

VERDICT

A fluid, organic sounding DAC that breathes life into all forms of music. Allies resolution with superb poise and great punch.

FOR

- powerful bass
- authoritative presentation
- rich detail
- build quality

AGAINST

- industrial appearance

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